

Please allow these following pages to serve as the amendment to application 08/881,021, for the claims, Figure drawing changes, new page 17 in section detailed description and specification, along with insertions of pages 18, 19, and 20 to complete the detailed description and specification section of the application.

Amendment is as follow:

- (a) Cancel claims 1 through 9 and insert my new claims 10 through 17

Having described the present invention I claim:

10. A computer controlled vending machine system that selectively dispenses food

and non food products including:

a housing, a CPU private housing, a private bank housing,

a plurality of front door frames with each doorframe including a plurality

of individual transparent compartment doors,

a central computer which operates the vending machine according to a program
of operations and stores data indicative of the performance of the vending machine,

a modem that can access the data stored in the computer and transmit the data to a
personal computer,

a plurality of multiple micro coin acceptor units having flip flop circuitry whereby an
insertion of a first coin creates an output toggle pulse to activate the program of operations,
and wherein

the pluralities of coin acceptor units are located in the front door frames with each coin acceptor
unit aligned with a transparent compartment door, and insertion of a predetermined value
of coins in one of the coin acceptor units allows the aligned compartment door to be opened
allowing dispensing of the product.

11. The computer controlled vending machine of claim 10, including coin carrying tracks leading from
coin acceptors, having adaptive means of directing coins into multiple change back units.

Claims Continued
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12. The computer controlled vending machine of claim 10, including a plurality of change units, and adaptive means to sort and return coins.

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13. The computer controlled vending machine of claim 10, including a plurality of race track form reel wheels, and

a plurality of swing type objects shelves, connected to each race track form reel wheel providing means of storing products until selectively purchased, and

a plurality of inner solenoid locking bridged bar doors, one bridged bar door connected to each swing type objects shelf for securing products while orbiting around in the swing type object shelf, and

a plurality of VDC stepper motors connected to the structured race track form reel wheel provides controlling means of wheel orbiting around its structure.

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14. The computer controlled vending machine of claim 13, including a plurality of index buttons, whereby, suppressing said index buttons will activate the VDC stepper motors, providing driving power to the race track form reel wheels connected shelves, in precise revolutions per second, release of index button positions shelves in the individual transparent compartment, allowing stored product to be selectively purchased, the index button is located on each plurality front door frames of present invention housing.

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15. The computer controlled vending machine of claim 10, including a numerical binary coded keypad peripheral device with a digital display screen, whereby punching in a programmed binary code key, activates optional service modes of operations ability to perform a self test diagnostics, provides ease in loading and servicing etc., machine on location, this keypad peripheral device takes housing on the inner wall, mid section of present invention housing.

Claims Continued
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7. ~~16.~~ The computer controlled vending machine of claim ~~10~~, including software directive programs on CDROM and or 3.5 floppy diskettes in setup, sample spreadsheets, help tips, and literature written in a basic computer format, compatible to load on any computer.

8. ~~17.~~ The computer controlled vending machine of claim ~~10~~, including an advisory digital print out message screen, alerts users, options and advisory directions on utilizing the present invention, such as coin deposit errors, a particular row of product need servicing, try another row etc., the advisory digital print out screen is located in the lower right hand corner of the CPU private housing, located in top front portion of present invention housing.

- (b) Page 8, of specifications entitled figure drawing explanations, cancel line 10 through line 12 and
- (c) delete figure 11, line 13 and insert therefore figure 10,
- (d) delete figure 12 line 17 and insert therefore figure 11,
- (e) delete figure 13, line 19 and insert therefore figure 12,
- (f) delete figure 14, line 22, cancel, in its entirety,
- (g) delete figure 15, line 23, and insert therefore figure 13.

Further I would like to cancel page 17 of section detailed description and specification of application 08/881,021 and insert the following:

DETAILED DESCRIPTION AND SPECIFICATION OF THE INVENTION (continued)

This application is a continuation -in-part of Serial Number 08/497,997 filed June 23, 1995 now abandoned, the present invention consists of plug-in subassembly subroutine units, that meet and plug in their mating male or female connector data lines, thus the provisional means of interfacing, and handshaking the CPU (16) compiler programmed system of logic sequential order of operations, whereby readily to receive and transmit data between the CPU (16) and subassembly subroutine units, desired functions.

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Detailed Description and Specification
Continued

The data plug-in harness lines are numbered and color coded for ease, and convenience in matching their appropriate connector, and run around the side's (3), (4), and bottom wall (7), of present invention inner (1) housing, neatly arranged away from functional operations of present invention (1), thus forming a path to the back wall (6), now in position to meet and plug into the mating male or female connectors coming from the CPU (16), back private housing (8), located in the top of present invention housing (1), the new subassembly subroutine plug-in arrangements provides additional ease in maintenance to present invention housing (1), firstly for interfacing and handshaking (16) CPU's system of programmed operations and secondly, ease in disconnecting and replacing a particular unit package in trouble shooting phase of the apparatus. All logic data on the continental USA, market today, has supporting documentation of parts, components, chips, storage, modems, motors, lock devices, fabricated material, microprocessors and the (CPU) chips, needed to manufacture present invention (1), which is a computer (hereafter CPU) compiled in soft and hardware languages, binary codes, an interfacing handshaking modem, and necessary supporting elements to form an operating system, designed as coin operable, which will activate a CPU to control a vending machine, that will store, and selectively dispense a variety of products, when ample coins deposited satisfy the CPU operating system protocols, and further, store the transaction data to its system memory, and whereby utilizing the systems interfaced modems, transmits, said stored transactions data to a personal computer, thus allowing communications with vending machines and computers, utilizing the computer operating system incorporated in present invention.

Details on the following ~~three~~ pages of this specification provide additional descriptions regarding the CPU Soft and Hardware considerations and terms, acceptance process, CPU processing, and a compute change table example.



Hardware Considerations and Terms

Coin Acceptor

Accepts coins by verifying their value and authenticity. Those coins rejected are routed immediately to the coin return. Coins accepted are routed to the Holding Bin pending refund or vending.

Holding Bin

Area in which all coins are collected for a given acceptor. Coins are released upon request for refund or the vending of the product.

Coin Return

Area which un-accepted coins, full refund (canceled selection) and change is returned to the customer.

Sorta / Changer

Unit that sorts coins to be used in preparing change upon overpayment into "tubes" by coin type. Unit also selects the proper number of coins to be dispensed in the process of making change.

Overflow Bin

Container of all coins from purchases which would not "fit" into the Sorta / Changer at the time of sale.

Assumptions:

All processing is described as if it were a single unit. The only shared component that needs to maintain which Acceptor / Vending Unit is being processed is the Sorta / Changer. This is to insure that the change being delivered is "routed" to the appropriate Coin Return.

CPU/Software Considerations and Terms

Accumulators

Counter in memory which counts the number of items. For each coin type being monitored (nickels, dimes, and quarters) there are three unique accumulators. For each item being tracked there is one set of three accumulators. Items being tracked would include, but not limited to: Coins in Holding Bin 1, Coins in Holding Bin 2, Coins in Holding Bin 3, Maximum Coins in Sorta/Changer, Minimum Coins in Sorta/Changer, Current Coins in Sorta/Changer, Current Coins in Overflow Bin, etc.

Indicators

Indicators are switches in memory that indicate specific conditions. These switch settings are checked after every transaction is processed through the CPU.

- The "No Change" indicator is set if any accumulator in Current Coins in Sorta/Changer is less than the corresponding accumulator in Minimum Coins in Sorta/Changer.
- The "Sorta/Changer Full" Indicator is set if any accumulator in Current Coins in Sorta/Changer plus the corresponding accumulator in Coins in Holding Bin (x) is greater than or equal to the corresponding accumulator in Maximum Coins in Sorta/Changer.
- The "Value in Holding Bin (x)" contains the computed value of all coins accepted by the corresponding Coin Acceptor.
- The "Value of Vending Bin (y)" contains the predetermined value of the product to be dispensed from bin (y). This value is set by the operator, and may not be changed by the customer.



The Acceptance Process

If the coin is accepted
then Notify the CPU as to type of coin (value) and Acceptor Id (CPU Process 1)
 Save the coin in a holding bin
else (rejected)
 Route coin to the Coin Return

The Refund Process

Notify the CPU that a return was requested (CPU Process 2)
Release all coins in the Holding Bin (for the acceptor) to the Coin Return

Dispense/Vend Process

If Vending Bin is Empty,
then no transaction takes place
 Message to operator, "Empty Bin, Make Another Selection"
 Terminate Dispense/Vend Process

If Vending Bin is Full (default if processing logic passes to this point)
Determine value of Vending Bin (y) Indicator (as each bin can vary in price)
Determine amount accepted in Holding Bin (x) Indicator
If Vending Bin (y) Indicator is greater than Holding Bin (x) Indicator
then Message to Operator "Insert Additional Amount"
 Terminate Dispense/Vend Process
Dispense Vending Bin
If "Sorta/Changer Full" Indicator
then Release all Coins in Holding Bin (x) to Overflow Bin
 notify the CPU that a sale was completed (CPU Process 3)
else Release all Coins in Holding Bin (x) to Sorta/Changer
 notify the CPU that a sale was completed (CPU Process 4)
If Vending Bin (y) Indicator is less than Holding Bin (x) Indicator [change due]
then Compute amount and coinage of change due (CPU Process 5)
 Dispense Change to the Coin Return (x)
 Terminate Dispense/Vend Process
else Terminate Dispense/Vend Process



PU Processing

Process 1 - Coin Accepted

Add 1 to Count of coins for the value of the coin accepted
(i.e. if the second nickel was entered, the count of nickels would be 2)
Compute the total value of all coins accepted
(Add value of coin accepted to acceptors' accumulated value)

Process 2 - Refund Requested

Zero all Counts of coins for the specific acceptor
Zero acceptors' accumulated value (total value of all coins accepted is reset to zero)

Process 3 - Accepted Coins to the Overflow Bin

By Coin type
Add the number of coins accepted to the number of coins in the coin bin
Compute the Value of coins in the Overflow Bin by multiplying Coin Value times Coin Count

Compute the total value of all coins in the Overflow Bin
(Sum the value of all coins by coin type)

Process 4 - Accepted Coins to the Changer (Sorta)

By Coin type
Add the number of coins accepted to the number of coins in the coin sorta
Compute the Value of coins in the sorta by multiplying Coin Value times Coin Count

Compute the total value of all coins in the Sorta
(Sum the value of all coins by coin type)

Process 5 - Dispense Change

Compute the amount of change to be dispensed by subtracting the value of the product from the amount accepted
Use the following table to determine the count of coins, by type, to be returned to the coin return:

Change	Nickels	Dimes	Quarters
\$ 0.05	1	0	0
\$ 0.10	0	1	0
\$ 0.15	1	1	0
\$ 0.20	0	2	0
\$ 0.25	0	0	1
\$ 0.30	1	0	1
\$ 0.35	0	1	1
\$ 0.40	1	1	1
\$ 0.45	0	2	1
\$ 0.50	0	0	2
\$ 0.55	1	0	2
\$ 0.60	0	1	2
\$ 0.65	1	1	2
\$ 0.70	0	2	2
\$ 0.75	0	0	3
\$ 0.80	1	0	3
\$ 0.85	0	1	3
\$ 0.90	1	1	3
\$ 0.95	0	2	3